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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,166	10/27/2003	Lon O. Hocker III	ONSET-018XX	3061

207 7590 06/23/2006

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EXAMINER	
FRANKLIN, RICHARD B	

ART UNIT	PAPER NUMBER
2181	

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/694,166	HOCKER ET AL.	
	Examiner	Art Unit	
	Richard Franklin	2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,17,19 and 30-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,17,19 and 30-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Supervisory

FRITZ FLEMING
PRIMARY EXAMINER 6/21/2006
GROUP 2100
92181

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 11, 17, 19, and 30 – 38 have been examined.

Response to Arguments

2. Applicant's arguments with respect to claims 1 – 11, 17, and 19 have been considered but are moot in view of the new ground(s) of rejection. New art has been introduced as prior art over applicant's amendments.

Claim Rejections - 35 USC § 112 1st Paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification is not enabling for wherein the communication between the computer and the battery-powered device uses ***a communication protocol with at least one transition per bit cell*** (emphasis added). Nowhere in the specification is this type of protocol described, or the use of the protocol described.

Claim Rejections - 35 USC § 112 2nd Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 – 11, 17, 19, and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 recites the limitation "the USB interface of a computer" in line 5 of the claim. There is insufficient antecedent basis for this limitation in the claim.

The Examiner has interpreted the limitation to recite "***a*** USB interface of a computer" (emphasis added).

6. Claim 1 recites the limitation "the electrical operating range of the computer" in lines 14 – 15 of the claim. There is insufficient antecedent basis for this limitation in the claim.

The Examiner has interpreted the limitation to recite "***an*** electrical operating range of the computer" (emphasis added).

7. Claim 1 recites the limitation "the formatting requirements of the computer and the battery-powered device" in lines 15 – 16 of the claim. There is insufficient antecedent basis for this limitation in the claim.

The Examiner has interpreted the limitation to recite "formatting requirements of the computer and the battery-powered device" (emphasis added).

8. Claim 1 recites the limitation "the electrical operating ranges of both the computer and the battery-powered device" in lines 14 – 15 of the claim. There is insufficient antecedent basis for this limitation in the claim.

The Examiner has interpreted the limitation to recite "***the*** electrical operating range of the computer ***and electrical operating range of the battery-powered device***" (emphasis added).

9. The term "substantially different" in claim 2 is a relative term which renders the claim indefinite. The term "substantially different" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The use of "substantially different" renders the "voltage" of the claim indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1 – 3, 6 – 11, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. 2004/0225811 (hereinafter Fosler) in view of "How Computers Work; 6th Edition" by Ron White (hereinafter White).

As per claim 1, Fosler teaches an apparatus for enabling communications between a USB interface (Fosler; Paragraph [0029]) of a computer (Fosler; Figure 1 Item 106) and a battery-powered device (Fosler; Figure 1 Item 108) not having a USB port, the apparatus comprising a microcomputer module having a USB-compliant module interface (Fosler; Figure 3b Item 308) for exchanging data signals with the computer, a microcomputer for controlling the exchange of data signals (Fosler; Figure 3d Item 320, Paragraph [0040]), and a memory element for storing microcomputer operating instructions and data processed thereby (Fosler; Figure 3d Item 322, Figure 4 Items 406 and 408, Paragraphs [0039] and [0042]), the microcomputer operating in the electrical operating range of the computer and selectively reformatting data in accordance with the formatting requirements of the computer and the battery-powered device (Fosler; Paragraph [0031]), respectively; and a bridging module in communication with the microcomputer of the microcomputer module and the battery-powered device and adapted to accommodate the electrical operating ranges of both the computer and the battery-powered device (Fosler; Figure 3c), whereby data transmitted by the computer via the USB interface is received at the microcomputer via the module interface, selectively reformatted by the microcomputer (Fosler; Paragraph [0040]), and transmitted to the battery-powered device via the bridging module, and whereby data transmitted by the battery-powered device is received at the

microcomputer module via the bridging element, selectively reformatted by the microcomputer, transmitted to the computer by the module interface, and received by the computer via the USB interface (Fosler; Paragraph [0040]).

Fosler does not teach that the USB-compliant interface receives power from the computer.

However, White teaches supplying electrical power to a peripheral using two of the four wires in a USB cable (White; Page 204 Number 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Fosler to include the power from the computer because doing so eliminates the need for bulky power supplies (White; Page 204 Number 4).

As per claim 2, Fosler also teaches wherein the battery-powered device operates at a voltage substantially different from that of the microprocessor (Fosler; Paragraphs [0034] – [0035]).

As per claim 3, Fosler also teaches wherein communication between the computer and the battery-powered device is initiated by the computer (Fosler; Paragraph [0011]).

As per claims 6 – 10, Fosler also teaches wherein a data link can be a wireless link, wireless infrared (IrDA), wireless radio frequency (RF), or a fiber-coupled optical communications link (Fosler; Paragraph [0031]).

As per claims 11 and 17, Fosler in combination with White teach all the elements of claims 1 (see rejection of claim 1 above).

Fosler in combination with White does not teach wherein the bridging module, battery-powered device, and microcomputer module are disposed in a common enclosure; or wherein the bridging module and the microcomputer module are disposed in an enclosure.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Fosler in combination with White to include the elements of the invention in the same or different enclosures. Such a modification is considered to be within the level of ordinary skill in the art as set forth by the following legal precedents; See Making Integral - *In re Larson*, 340 F.2d 965, 967, 144 USPQ 347, 349 (CCPA 1965); *In re Wolfe*, 251 F.2d 854, 855, 116 USPQ 443, 444 (CCPA 1958) and See Making Separable – *In re Dulberg*, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961).

As per claims 19, Fosler also teaches wherein the microcomputer module further comprises a power supply (Fosler; Figure 3a, Paragraph [0034]).

11. Claims 4 – 6, 31 – 33, and 35 – 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. 2004/0225811 (hereinafter Fosler) in view of "How Computers Work; 6th Edition" by Ron White (hereinafter White) and further in view of US Patent No 5,559,996 (hereinafter Fujioka).

As per claim 4, Fosler in combination with White teaches the system as described per claim 1 (see rejection of claim 1 above).

Fosler in combination with White does not teach wherein the bridging module comprises a direct electrical connection from the batter-powered device to the microcomputer module; and an electrical connection including the level shifting circuit to reduce the amplitude of the data conveyed from the microcomputer module to the battery-powered device.

However, Fujioka teaches a direct electrical connection from the batter-powered device to the microcomputer module (Fujioka; Figure 10 Item 503); and an electrical connection including the level shifting circuit (Fujioka; Figure 10 Item 52) to reduce the amplitude of the data conveyed from the microcomputer module to the battery-powered device (Fujioka; Col 10 Line 64 – Col 11 Line 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Fosler in combination with White to include the direct electrical connection because doing so allows for voltage conversions according to the specific voltage requirements of the attached systems (Fujioka; Col 10 Line 64 – Col 11 Line 1).

As per claim 5, Fosler teaches wherein the communication between the computer and the battery-powered device uses a communication protocol with at least one transition per bit cell (Fosler; Paragraph [0005]).

As per claim 6, Fosler in combination with White and Fujioka obviously teach wherein the level shifting circuit is a voltage divider circuit because voltage divider circuits are well known in the art as a way to reduce a voltage by using appropriate resistors to divide the voltage between the two resistors.

As per claim 31, Fosler teaches a bridging circuit (Fosler; Figure 1 Items 102, 104, and 120) in communication with the first microcomputer (Fosler; Figure 1 Item 108); and a USB interface module, comprised of a second microcomputer (Fosler; Figure 1 Item 120) and an associated USB-compliant interface (Fosler; Figure 1 Item 104), the USB interface module being in communication with the bridging circuit and being in selective communication with the computer via the USB connection (Fosler; Paragraphs [0029] and [0031]).

Fosler does not teach wherein the second microprocessor is selectively powered by a power signal associated with the USB connection.

However, White teaches wherein a device is powered by a power signal associated with a USB connection (White; Page 204 Number 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Fosler to include the

power from the computer because doing so eliminates the need for bulky power supplies (White; Page 204 Number 4).

Fosler in combination with White does not teach a battery having a first voltage level; and a first microprocessor powered by the battery.

However, Fujioka teaches a power supply (Fujioka; Figure 10 Item 501, Col 10 Lines 52 – 57) having a first voltage and powering a microprocessor (Fujioka; Figure 10 Item 53, Col 10 Lines 52 – 57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Fosler in combination with White to include the battery and microprocessor because doing so allows the peripheral device to be powered independently of the host system.

As per claim 32, Fosler also teaches wherein the bridging circuit is adapted to compensate for the different first and second voltage levels, thereby enabling data exchange between the first and second microcomputers (Fosler; Paragraph [0035]).

As per claim 33, Fujioka also teaches wherein the bridging circuit is comprised of a level shifting circuit (Fujioka; Figure 10 Item 52, Col 10 Line 64 – Col 11 Line 1).

As per claims 35 – 38, Fosler also teaches wherein a data link can be a wireless link, wireless infrared (IrDA), wireless radio frequency (RF), or a fiber-coupled optical communications link (Fosler; Paragraph [0031]).

12. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. 2004/0225811 (hereinafter Fosler) in view of "How Computers Work; 6th Edition" by Ron White (hereinafter White) and further in view of US Patent No. 6,233,640 (hereinafter Luke).

As per claim 30, Fosler in combination with White teaches the system as described per claim 1 (see rejection of claim 1 above).

Fosler in combination with White does not teach wherein the microcomputer module provides USB enumeration information from the battery-powered device to the computer if the microcomputer module is in communication with the battery-powered device and different USB enumeration information if the microcomputer module is not in communication with the battery-powered device.

However, Luke teaches wherein the microcomputer module provides USB enumeration information from the battery-powered device to the computer if the microcomputer module is in communication with the battery-powered device and different USB enumeration information if the microcomputer module is not in communication with the battery-powered device (Luke; Col 4 Lines 30 – 43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Fosler in combination with White to include enumeration because doing so allows for the USB interface to communicate with the device.

13. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. 2004/0225811 (hereinafter Fosler) in view of "How Computers Work; 6th Edition" by Ron White (hereinafter White) further in view of US Patent No 5,559,996 (hereinafter Fujioka) and further in view of Applicants Admitted Prior Art (hereinafter AAPA).

As per claim 34, Fosler in combination with White and Fujioka teach the system as described in claim 31 (see rejection of claim 31 above).

Fosler in combination with White and Fujioka do not teach wherein the battery-powered device has a sensor.

However, AAPA teaches wherein battery-powered devices have sensors for collecting information (AAPA; "Background of the Invention" Page 1 Lines 24 – 27).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Fosler in combination with White and Fujioka to include the sensors because doing so allows for the measurement of variables such as temperature, PH, RH, pressure, and physiological variables such as temperature measurements or EKG measurements of animals or humans (AAPA; "Background of the Invention" Page 1 Lines 24 – 27).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Franklin whose telephone number is (571) 272-0669. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz Fleming can be reached on (571) 272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Richard Franklin
Patent Examiner
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6/21/2006